

A Pilot Task-Oriented Evaluation of Evidence-Based Medicine Databases

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Clinicians currently face major obstacles in using the medical literature to answer questions that arise during practice.¹ These obstacles include problems managing the volume of the medical literature, lack of time for searching, and trouble screening out irrelevant information.² Recently, several databases of evidence-based medicine (EBM) resources have become available that contain articles and abstracts selected for high methodologic quality and clinical relevance. Proponents of EBM have suggested that these new databases will prove useful in meeting clinicians' information needs.³ However, no study has demonstrated the usefulness of EBM databases. The goal of the current study is to assess whether EBM databases can help clinicians to answer clinical questions.

METHODS

The study employed a task-oriented evaluation strategy similar to that described by Hersh et al.⁴ Questions with associated clinical narratives were selected from the American College of Physicians Medical Knowledge Self-assessment Program 10. These questions cover core concepts of internal medicine and have well-defined answers. This list of questions was further narrowed by a panel of clinicians who identified the questions most similar to those encountered in clinical practice for which they might search the medical literature.

Three EBM databases were selected for evaluation: The 1996 American College of Physicians Journal Club on Disk, the 1996 Cochrane Collaboration Library, and a collection of Internet EBM World Wide Web documents indexed by the author (IDEA).

After receiving instruction on use of the databases, clinician subjects each searched for answers to 1 to 3 clinical questions selected at random from among those chosen by the clinician panel. Before searching, the clinicians answered each question. The time needed to search and the clinician's answer after searching were recorded for each EBM database. Clinicians also recorded their answers after reviewing any articles cited in the databases that they requested. All searches were repeated by the author to verify the presence or absence of answers.

RESULTS

7 subjects searched for answers to 21 questions. Prior to searching the subjects answered 24% of the questions correctly, 67% incorrectly and 9% partly correctly. After searching the three databases and reviewing any requested references, subjects answered 24% of questions correctly, 62% incorrectly and 14% partly correctly. The average time spent searching was 234 seconds for the ACP Journal Club, 202 seconds for the Cochrane Library, and 117 seconds for IDEA. The ACP Journal Club contained answers to 0% of questions, the Cochrane library to 0%, and IDEA to 10%, respectively. When articles cited in the databases were included, the ACP Journal Club answered 5% of questions, the Cochrane library 20%, and IDEA 10 %, respectively.

DISCUSSION

This task-oriented evaluation showed that clinicians can search EBM databases in two to four minutes. However, in their current state, these databases rarely helped clinicians to answer a sample of clinical questions that span the spectrum of internal medicine. One important reason is that EBM databases are of limited size and do not cover a broad range of topics. Also, searchers failed to locate some answers given by these databases. Further research involving a larger sample of subjects and questions is needed to ascertain whether these preliminary findings are correct.

References

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